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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,009	02/08/2002	Gregory Hullender	003797.00252	6424
28319	7590	01/13/2005	EXAMINER	
BANNER & WITCOFF LTD., ATTORNEYS FOR MICROSOFT 1001 G STREET, N.W. ELEVENTH STREET WASHINGTON, DC 20001-4597			VU, KIEU D	
			ART UNIT	PAPER NUMBER
			2173	
DATE MAILED: 01/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,009

Applicant(s)

HULLENDER ET AL.

Examiner

Kieu D Vu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2002 and 01 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/8/2, 3/31/4</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the Application filed 08/02/02 and the Preliminary Amendment filed 12/01/04.
2. Claims 8-11 are pending.
3. IDS filed 05/08/02 and 03/31/04 have been considered. Initialed copies are attached with this Office Action.

Specification

4. The Specification is objected because of the following reasons:
5. The Applicant is reminded to provide the Serial Number of the relating application cited in line 5 of page 1.
6. Line 14 of page 16 has a typographical error. The word "stokes" should be rewritten as "strokes".
7. After comparing the specification with the figures, it is noted that there are typographical errors in the following lines.

Lines 12-13 of page 15:

These lines should be rewritten as follows:

If a gesture was not received in step 505 the application processes the strokes
506. If a gesture was received in step 505, the application processes the gesture in step
507.

Line 4 of page 20.

Sentence "Section 706 includes the action area of the gesture." should be rewritten as "Section 707 includes the action area of the gesture."

Drawings

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

Reference characters 195, 196, 197, 198 in Fig. 1 are not mentioned in the description.

Reference character 507 in Fig. 5 is not mentioned in the description.

Reference character 707 in Fig. 7 is not mentioned in the description.

9. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 8-11 are rejected under 35 U.S.C. 101 for the following reason:

Regarding claim 8, the language of the claim raises a question as to whether the claim is directed merely to a mathematical algorithm that is not tied to a technological art, environment or a machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 USC 101.

Claim 9-11 are rejected under the same rationale as applied to claim 8 above.

11. To expedite a complete examination of the instance application, the claims rejected under 35 USC 101 (non-statutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adcock (USP 5764797) and Savakis et al ("Savakis", USP 6671405).

Regarding claim 8, Adcock teaches a method for determining if received strokes are gestures comprising normalizing at least one stroke to create a normalized at least one stroke (col. 2, lines 10-15; figure 3), computing Chebyshev polynomials for the coordinates (col. 2, lines 15-17; figure 4), combining the normalized stroke with the Chebyshev polynomials to create a set of generated coefficients of the inputted stroke

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(equivalent to a Bayes net of the inputted stroke), comparing said set of generated coefficients to previously computed prototypes (equivalent to computed Bayes nets) of hand-written characters for known gestures (col. 2, lines 17-19) (col. 5, lines 36-51), determining whether said set of generated coefficients of the inputted character matches with one of stored prototypes of hand-written characters, then processing said stroke as a gesture corresponding to one of said prototypes (col. 2, lines 19-22). In Adcock's system, the comparison is performed by classifier 30 (col. 5, lines 36-42), and the preferred classifier is Bayesian Classifier (col. 5, lines 46-51). Adcock differs from the claim in that Adcock does not explicitly teach the use of Bayes net to perform the task of classification/pattern recognition. However, such use is known in the art as evidenced by Savakis et al. Specifically, Savakis teaches the use of Bayes net for the task of classification/pattern recognition (col. 14, lines 41-56). Savakis further teaches that Bayes net's advantages include its efficient computation, easy construction and fast adaptation to changes. Thus, it would have been obvious to one skilled in the art at the time the invention was made to use Savakis's teaching of using Bayes net for the task of classifier/pattern recognition in Adcock's classifier with the motivation being to provide efficient computation, easy construction and fast adaptation to changes.

Regarding claim 9, Adcock teaches the compressing the stroke into a single point stream as illustrated in figure 7 which shows a single stream of points (col 9, lines 48-59).

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Regarding claim 10, Adcock further teaches scaling the time entry of the points of the stroke to create a scaled time (see figure 8 which shows a scaled time) which is used to create the set of coefficient (equivalent to Bayes net).

Regarding claim 11, Adcock teaches the computation of stroke windings and duration of the stroke (see the computation of coordinates, size and duration of the strokes (col. 4, lines 5-11; col. 9, lines 63 to col 10, line 7). Adcock teaches using scaled time (see figure 8 which shows a scaled time) in the set of coefficient (equivalent to Bayes net).

14. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action.

Gholizadeh et al (USP 5369737) teaches a method for normalizing vector-based terms by determining of the magnitude of a vector associated with each vector-based term by using series of expansion such as Chebyshev polynomial approximation.

Luo et al (USP 6826316) teaches a method for determining image similarity. The method comprises computing structure and semantic features for each region and computing a belief value for all the pixels in the region using a Bayes net to combine features.

Nguyen (USP 6256033) teaches a system for recognizing gestures by comparing positional data of the gesture and the previously data representing gestures known to the system.

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Tannenbaum et al (USP 5252951) teaches a graphical user interface for gesture recognition by compare completed stroke against all shapes found in the gesture libraries.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kieu D. Vu.

The examiner can normally be reached on Mon - Thu from 7:00AM to 3:00PM at 571-272-4057.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca, can be reached at 571-272-4048.

The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

703-872-9306

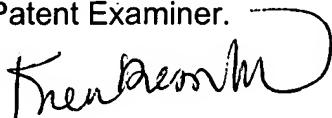
and / or:

571-273-4057 (use this FAX #, only after approval by Examiner, for "INFORMAL" or "DRAFT" communication. Examiners may request that a formal paper / amendment be faxed directly to them on occasions).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703-305-3900).

Kieu D. Vu

Patent Examiner.

A handwritten signature in black ink, appearing to read 'Kieu D. Vu', written over a horizontal line.